

1. A height adjustable protective garment comprising:

an outer shell shaped to fit about the chest, torso and legs of a wearer and having a waist portion shaped to be located at or adjacent to a waist of a wearer; and

an adjusting strip having an attachment portion directly or indirectly coupled to said outer shell and a free end which is generally spaced apart from said attachment portion, said free end being releasably attachable to said outer shell or to said strip of material to adjust the height of said protective garment, said adjusting strip being located at or adjacent to said waist portion.

2. The garment of claim 1 wherein said adjusting strip includes a base portion fixedly coupled to said outer shell and spaced apart from said attachment portion, and wherein said attachment portion is located between said base portion and said free end.

3. The garment of claim 1 wherein said adjusting strip is shaped and located such that when said free end is releasably attached to said outer shell or to said strip of material the attachment portion pulls the portions of said outer shell to which said attachment portion is coupled generally upwardly to reduce the height of said garment.

4. The garment of claim 1 wherein said adjusting strip is formed in a generally closed loop shape when said free end is releasably attached to said outer shell or to said adjusting strip.

5. The garment of claim 4 wherein said adjusting strip is releasably attachable to itself to form said generally closed loop shape.

6. The garment of claim 5 wherein said adjusting strip includes first and second portions of hook and loop fastening material which are releasably attached when said strip of material is formed into said generally closed loop shape.

7. The garment of claim 6 wherein said adjusting strip includes a base portion fixedly coupled to said outer shell and spaced apart from said attachment portion, said attachment portion being located between said base portion and said free end, and wherein said first portion

of hook and loop fastening is located on or adjacent to said base portion and wherein said second portion of hook and loop fastening material is located on or adjacent to said free end.

8. The garment of claim 4 wherein said adjusting strip is releasably attachable to said outer shell to form said generally closed loop shape.

9. The garment of claim 8 wherein said garment includes first and second portions of hook and loop fastening material which are releasably attachable to form said adjusting strip into said generally closed loop shape, and wherein said first portion of hook and loop fastening is located on said outer shell and wherein said second portion of hook and loop fastening material is located on or adjacent to said free end.

10. The garment of claim 1 wherein said garment has a central axis extending generally perpendicular to the waist of said garment, and wherein said adjusting strip is oriented generally parallel to said central axis.

11. The garment of claim 10 wherein said adjusting strip includes a base portion fixedly coupled to said outer shell and spaced apart from said attachment portion, and wherein said attachment portion is located between said base portion and said free end, and wherein said adjusting strip further comprises a retaining loop fixedly coupled to said outer shell and located over said attachment portion to indirectly couple said attachment portion to said outer shell.

12. The garment of claim 11 wherein said retaining loop is oriented generally perpendicular to said central axis.

13. The garment of claim 11 wherein said retaining loop has a pair of ends, each end being fixedly coupled to said shell on opposite sides of said adjusting strip.

14. The garment of claim 1 wherein said outer shell is abrasion, flame and heat resistant.

15. The garment of claim 14 wherein said outer shell can resist igniting, burning, melting, dripping or separation when exposed to a temperature of 500° F for at least five minutes.

16. The garment of claim 14 wherein said outer shell includes a material selected from a group of consisting of an aramid material, a blend of aramid materials, a polybenzamidazole material, and a blend of aramid and polybenzamidazole materials.

17. The garment of claim 14 further comprising a moisture barrier located generally inside of said outer shell such that when said garment is worn said moisture barrier is located generally between said outer shell and a wearer of said garment, said moisture barrier being generally co-extensive with said outer shell and being made of a material that is generally liquid
5 impermeable and generally moisture vapor permeable.

18. The garment of claim 17 wherein said moisture barrier includes expanded polytetrafluoroethylene.

19. The garment of claim 17 further comprising a thermal liner located generally inside said outer shell such that when said garment is worn said thermal liner is located generally between said outer shell and a wearer of said garment.

20. The garment of claim 19 wherein said moisture barrier is generally located between said outer shell and said thermal liner.

21. The garment of claim 19 wherein said thermal liner includes a material selected from a group consisting of an aramid needlepunch material, an aramid batting material, an aramid non-woven material, an aramid-blend needlepunch material, an aramid-blend batting material and an aramid-blend non-woven material.

22. The garment of claim 19 further comprising a face cloth layer located inside of said thermal liner and located to be the innermost layer of said garment.

23. The garment of claim 1 wherein said garment includes a plurality of adjusting strips each having a base portion fixedly coupled to said outer shell, an attachment portion directly or indirectly coupled to said outer shell at a location spaced apart from said base portion, and a free end which is generally spaced apart from said attachment portion, said free end being releasably attachable to said outer shell or to said strip of material to adjust the height of said protective garment, and wherein said adjusting strips are spaced about said waist of said garment.

24. A method for adjusting the height of a protective garment comprising the steps of:
providing a protective garment having an outer shell shaped to fit about the chest, torso and legs of a wearer and having a waist portion shaped to be located at or adjacent to a waist of a wearer, said protective garment including an adjusting strip having an attachment portion directly or indirectly coupled to said outer shell and a free end which is generally spaced apart from said attachment portion, said adjusting strip being located at or adjacent to said waist portion of said garment; and
releasably attaching said free end being said outer shell or to said strip of material to adjust the height of said protective garment.

25. A height adjustable protective garment comprising:
an outer shell of abrasion, flame and heat resistant material such that said outer shell can resist igniting, burning, melting, dripping or separation when exposed to a temperature of 500° F for at least five minutes; and
an adjusting strip having an attachment portion directly or indirectly coupled to said outer shell and a free end which is generally spaced apart from said attachment portion, said free end being releasably attachable to said outer shell or to said strip of material to adjust the height of said protective garment.

26. A height adjustable protective garment comprising:
an outer shell shaped to fit about the chest, torso and legs of a wearer and having a waist portion shaped to be located at or adjacent to a waist of a wearer and being made of abrasion, flame and heat resistant material such that said outer shell can resist igniting, burning,

melting, dripping or separation when exposed to a temperature of 500° F for at least five minutes; and

a height adjusting system positioned at or adjacent to said portion of said garment such that said height adjusting system can be operated to adjust the height of said protective garment.

27. The garment of claim 26 wherein said height adjusting system includes a first attaching strip extending generally around said waist portion in a generally closed loop shape and a second attaching strip extending generally around said waist portion in a generally closed loop shape, said second attaching strip being generally parallel to and spaced apart from said first attaching strip, wherein said first and second attaching strips are releasably attachable together to adjust the height of said protective garment.

28. The garment of claim 27 further comprising a strip of intermediate material located between and extending between said first and second attaching strip.

29. The garment of claim 27 wherein when said first and second attaching strips are attached together the height of said garment is reduced as compared to when said first and second attaching strips are not attached together.

30. The garment of claim 27 wherein said first and second attaching strips are each a zipper, slide fastener, or patch of hook-and-loop fastening material.

31. The garment of claim 25 wherein said outer shell includes a material selected from a group of consisting of an aramid material, a blend of aramid materials, a polybenzamidazole material, and a blend of aramid and polybenzamidazole materials.

32. The garment of claim 25 further comprising a moisture barrier located generally inside of said outer shell such that when said garment is worn said moisture barrier is located generally between said outer shell and a wearer of said garment, said moisture barrier being

generally co-extensive with said outer shell and being made of a material that is generally liquid
5 impermeable and generally moisture vapor permeable.

33. The garment of claim 32 further comprising a thermal liner located generally inside said outer shell such that when said garment is worn said thermal liner is located generally between said outer shell and a wearer of said garment.

34. The garment of claim 33 wherein said moisture barrier is generally located between said outer shell and said thermal liner.

35. The garment of claim 33 wherein said thermal liner includes a material selected from a group consisting of an aramid needlepunch material, an aramid batting material, an aramid non-woven material, an aramid-blend needlepunch material, an aramid-blend batting material and an aramid-blend non-woven material.

36. The garment of claim 33 further comprising a face cloth layer located inside of said thermal liner and located to be the innermost layer of said garment.

37. The garment of claim 25 wherein said height adjusting system includes an adjusting strip an attachment portion directly or indirectly coupled to said outer shell and a free end which is generally spaced apart from said attachment portion, said free end being releasably attachable to said outer shell or to said strip of material to adjust the height of said protective garment.

38. The garment of claim 37 wherein said adjusting strip includes an base portion fixedly coupled to said outer shell and spaced apart from said attachment portion, and wherein said attachment portion is located between said base portion and said free end.

39. A method for adjusting the height of a protective garment comprising the steps of:
providing a protective garment having an outer shell shaped to fit about at least part of the body of a wearer and being made of abrasion, flame and heat resistant material such that said outer shell can resist igniting, burning, melting, dripping or separation when exposed to

a temperature of 500° F for at least five minutes, and a height adjusting system positioned at or adjacent to the waist of said garment; and

operating said height adjusting system to adjust the height of said protective garment.